

Serial No.: 10/610,499

Confirmation No.: 5391

Applicants: BRADBURY, Andrew J. *et al.*

Atty. Ref.: 8011.406.CPUS00

[0031] These tests have been carried out with different grades of barite: a standard grade of API barite, having a weight average particle diameter ( $D_{50}$ ) of about 20  $\mu\text{m}$ ; a commercial barite (M) made by milling/grinding barite whilst in the dry state, with an average size of 3  $\mu\text{m}$  - 5  $\mu\text{m}$  and colloidal barite according the claimed subject matter (with a  $D_{50}$  from 0.5  $\mu\text{m}$  to 1.5  $\mu\text{m}$ ), with a dispersant included during the "wet" grinding process. ~~The corresponding particle size distributions are shown FIG. 1.~~ The dispersant is IDSPERSE<sup>TM</sup> XT (Mark of Schlumberger), an anionic acrylic ter-polymer of molecular weight in the range 40,000 to 120,000 with carboxylate and other functional groups. This preferred polymer is advantageously stable at temperature up to 200° C., tolerant to a broad range of contaminant, gives good filtration properties and do not readily desorb off the particle surface.